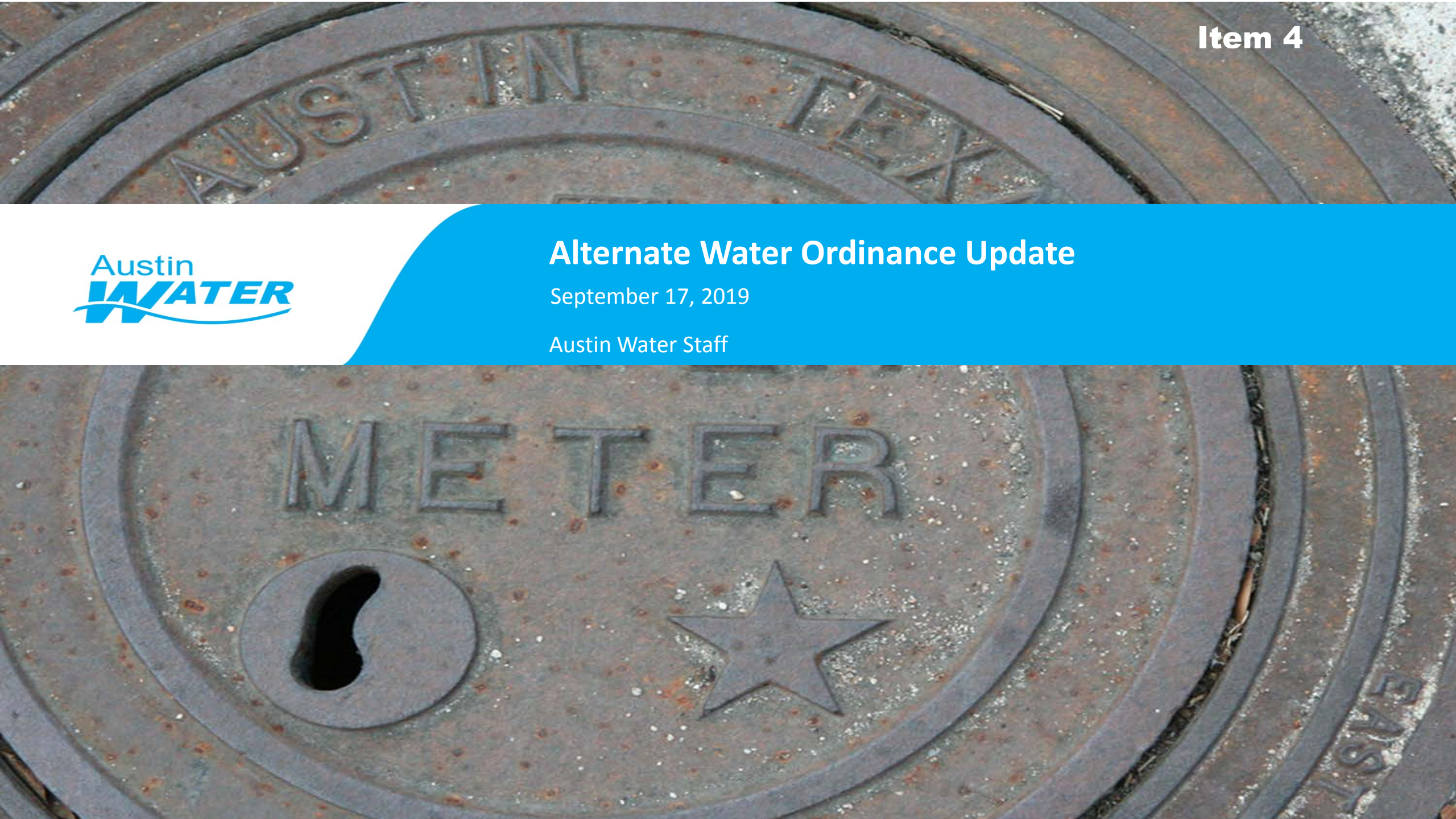
Item 4



Austin WATER

Alternate Water Ordinance Update

September 17, 2019

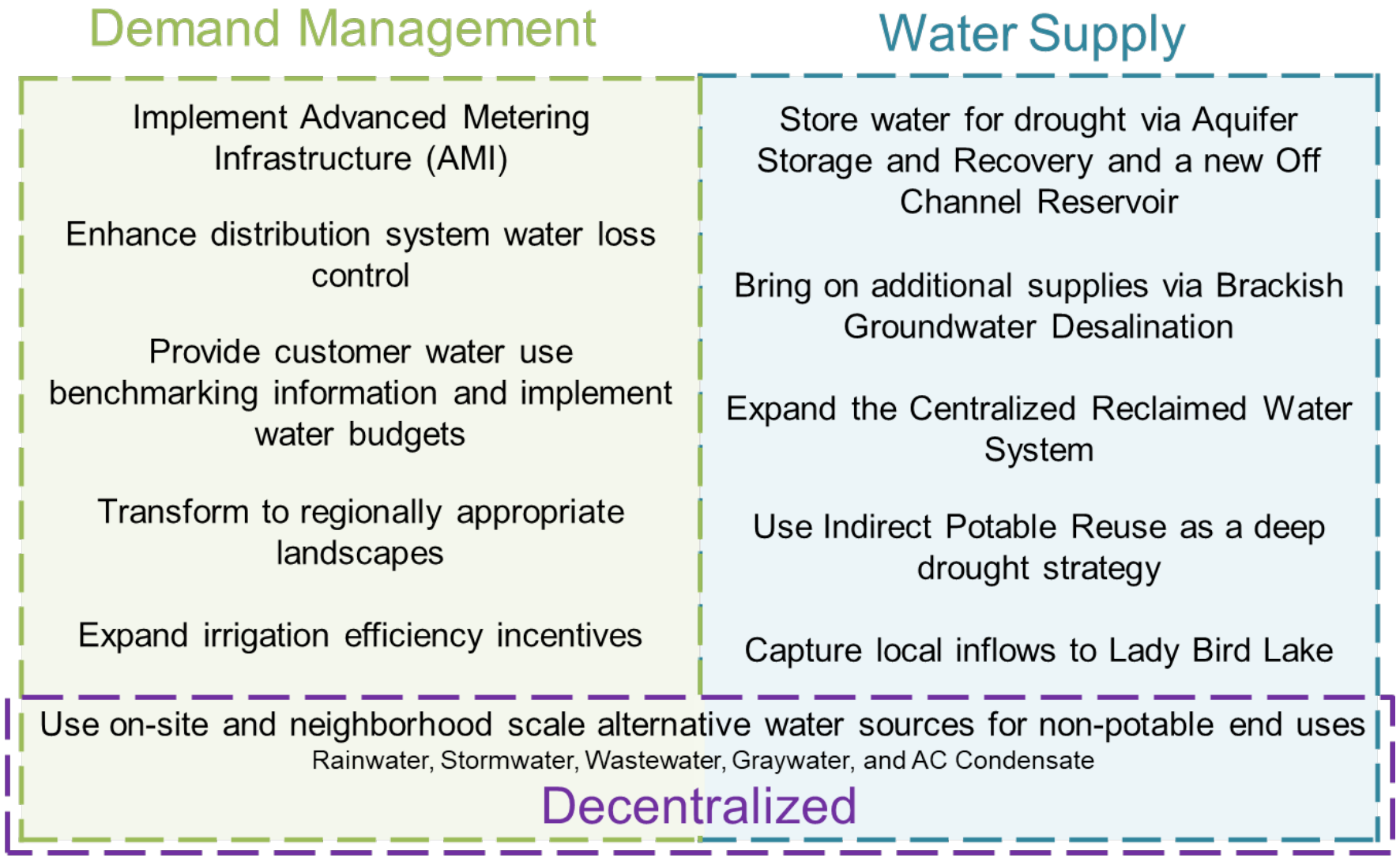
Austin Water Staff

Water Forward

Austin's Integrated Water Resource Plan

- Austin Water-led interdepartmental effort to develop a 100 year water plan that:
  - Reflects our community's values
  - Ensures a diversified, sustainable, and resilient water future
  - Places strong emphasis on conservation
- Council-appointed Task Force met monthly
- Plan approved by Council in November 2018, with planned updates on a five year cycle

Water Forward Plan Strategies



Direction from Council 5/2/19

"To ensure that the Land Development Codes and permitting process are streamlined to the greatest extent possible upon adoption of any revision to the Land Development Code, the regulatory requirements adopted as part of Water Forward, Austin's 100-year integrated water resource plan, that are related to the Land Development Code and are able to be accelerated and implemented this year should be codified and implemented as part of this comprehensive land development code revision process.

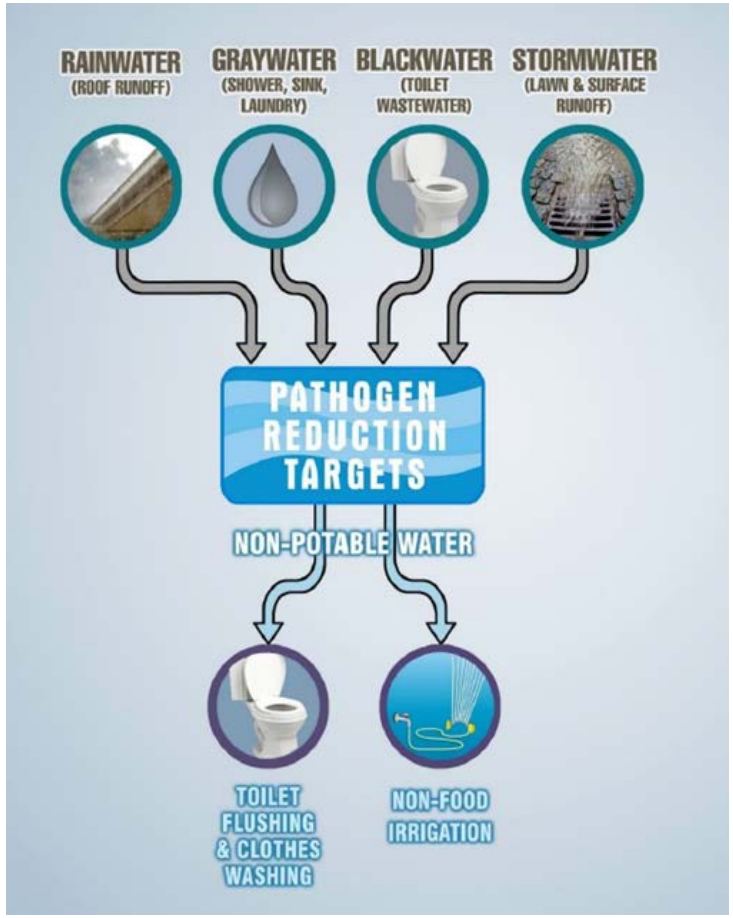
The staff should report back at least on the following areas if they were not able to accelerate and implement this year (especially as concerns commercial buildings larger than 250,000 square feet): water benchmarking, dual plumbing, landscape transformation, and alternative water."

AUSTIN WATER AND THE BLUE RIBBON COMMISSION

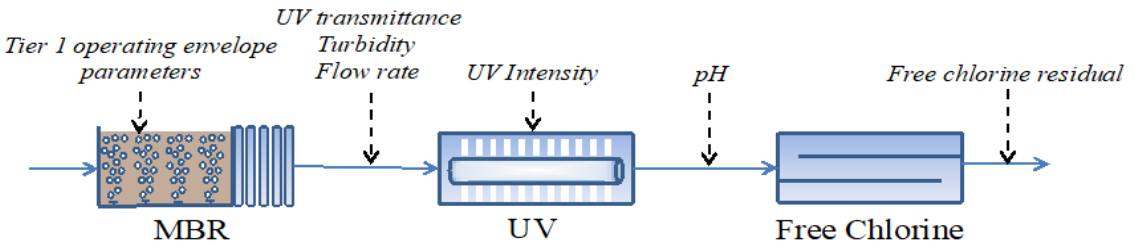
National Blue Ribbon Commission for Onsite Non-potable Water Systems

The National Blue Ribbon Commission advances best management practices to support the use of onsite non-potable water systems within individual buildings or at the local scale. We are committed to protecting public health and the environment, and sustainably managing water—now and for future generations.

THE NBRC FRAMEWORK ENSURES ONSITE TREATMENT SYSTEMS ARE ACHIEVING PUBLIC HEALTH GOALS



Unit Process	Pathogens: Virus	Pathogens: Protozoa	Pathogens: Bacteria	Water Quality: Particulates	Water Quality: Organics	Removal / Inactivation Mechanisms
Biological Treatment						
Non-membrane options						Biodegradation, adsorption, predation
MBR						Same as above plus size exclusion
Filtration						
Granular media filter						Physical removal (e.g., size exclusion, interception, diffusion)
Cartridge filter						
Membrane filter						Physical removal (e.g., size exclusion)
Reverse osmosis						
Disinfection						
UV						Physical degradation
Free chlorine						Chemical inactivation and oxidation
Chloramine						
Ozone						



NBRC FRAMEWORK FOR DEVELOPING A LOCAL PROGRAM

Blueprint for Onsite Systems: A Step-by-Step Guide for Developing a Local Program to Manage Onsite Water Systems (2014)

Developing a local program to manage onsite water systems offers a proactive way to increase water resiliency and promote green building practices while protecting public health. The development of a program should follow a sequence of steps and associated actions, which will inform critical decisions regarding the scope, structure, and implementation of the program.

1 **Convene a Working Group**
Establish a small working group to guide the development of the local program.

2 **Select the Types of Alternate Water Sources**
Narrow the specific types of alternate water sources covered in the program.

3 **Identify End Uses**
Classify specific non-potable end uses for your program.

4 **Establish Water Quality Standards**
Establish water quality standards for each alternate water source and/or end use.

5 **Identify and Supplement Local Building Practices**
Integrate your program into local construction requirements and building permit processes.

6 **Establish Monitoring and Reporting Requirements**
Establish water quality monitoring and reporting requirements for ongoing operations.

7 **Prepare an Operating Permit Process**
Establish the permit process for initial and ongoing operations for onsite water systems.

8 **Implement Guidelines and the Program**
Publicize the program to provide clear direction for project sponsors and developers.

9 **Evaluate the Program**
Promote best practices for onsite water systems.

10 **Grow the Program**
Explore opportunities to expand and encourage onsite water systems.

Having a consistent policy framework across cities and states is one of the best ways that we can integrate onsite systems in a way that protects public health and meets our water needs.

ALTERNATIVE WATER ORDINANCE DEVELOPMENT RECAP

Date	Event
5/2	Received Council direction to include Water Forward ordinances in LDC to the extent possible with emphasis on developments >250,000 SF
5/7	Full Water Forward Task Force Meeting
6/25	Alternative Onsite Reuse Workshop #1: Code Concepts
7/9	Full Water Forward Task Force Meeting
7/16	Water Forward Task Force Ordinance Subcommittee Meeting
7/23	Alternative Onsite Reuse Workshop #2: Ordinance Approach
8/13	Water Forward Task Force Ordinance Subcommittee Meeting
8/30	Draft LDC language due for Oct 4th release
9/3	Full Water Forward Task Force Meeting

WORKSHOP #2: ONSITE REUSE ORDINANCE APPROACH

Program & Incentive Development	Program Implemented with Incentive	Mandate Implemented
• Establishes new rules/regulatory framework for Onsite Water Reuse Systems • Incentive program developed to incentivize systems under new rules	• All new Onsite Systems required to meet new rules & obtain permit from Austin Water • Incentives issued to large projects to incentivize program participation for non-mandated systems	• All new developments >250,000 square feet must incorporate Onsite Water Reuse & obtain permit from Austin Water

Mandatory Water Balance Submittal

- New developments submit water balance with site plan applications
- >250,000 square feet developments meet with AW staff to discuss water balance results and grant program until mandate takes effect

Water balance submittal and in-person staff meetings planned to coincide with opening of City's new Planning and Development Center (anticipated May/June 2020)

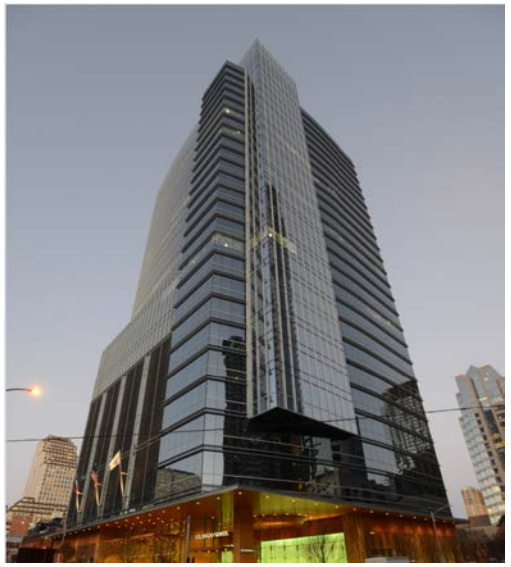
Existing A/C Condensate Recovery Rules for Cooling Towers

- New facilities with 100 tons or more cooling capacity must offset at least 10% of make-up water with alternative water
- New facilities with 200 tons or more cooling capacity must reuse A/C condensate onsite

WORKSHOP FORMAT: REVIEW THREE EXAMPLE PROJECTS

Mixed Use w/ Ground Floor Retail
<250,000 SF

Multi-family Suburban Complex
> 250,000 SF



Commercial Office High-rise
>250,000 SF

- 3 groups working through the projects together at one station
- 30 minutes for each project with a 15-minute break after projects 2 & 3
- Report out and discussion on the ordinance approach at the end of workshop

Stakeholder Workshop #2 Feedback

Major Theme	Specific Feedback
1. Cost of Onsite Reuse Systems	• Is there/will there be a cost-benefit analysis for this mandate? • Consider public perception, at some point we'll have to sell the mandate to the public. • Show savings that offset permit costs.
2. Development Incentives to Incorporate Onsite Reuse	• Would like as many cross-credits as possible with other City mandates. • How do stormwater/water quality requirements interact with the future mandate? Can double-credit be given for water quality credits? • Will there be incentives relating to capital recovery fee/impact fee to encourage adoption? • Downtown density bonus is precedent-incentive-based menu of options.
3. Interdepartmental Coordination	• An Onsite Reuse System review adds extra complexity that will be difficult to navigate if not properly supported by city staff and coordinated between depts. • Dream would be to have 1 meeting upfront with all City departments that have sustainability goals in a single discussion and to get clear direction on building design requirements
4. Alternative Mandate Threshold	• 250K SF seems arbitrary, mandate should be based on usage (1 million gallons/year). • Certain building typologies are better suited to produce demand savings. • Construction type or FAR could be triggers for single buildings (Type 1, stick frame) • Look at differing geographic requirements (downtown vs. edge of service area)

Stakeholder Workshop #2 Feedback

Water Balance/Benchmarking Calculator
Make calculator downloadable in one click.
Provide a tool for the water balance rather than incurring more soft costs.
At the site plan stage, you know acres and who's using the building, but more specific information about the development is known by the time you reach the building permit stage so the calculations will likely need revision. Will this trigger re-reviews?
Provide a pre-site plan meeting process to discuss water balance results so that there's time to incorporate reuse.

Pilot Program Incentive
What is the funding source for this incentive?
Should provide an incentive and let developer decide what type of system to build.
Are projects <250,000 SF eligible?

Stakeholder Workshop #2 Feedback

Clarification Needed
• What are the statistics regarding rates of previous (and future) development that would be affected by the proposed code language?
• Do we want to meet a building reuse target of 100% use? 90% use? • Will requirements be to offset a certain amount of demand or a range of demands? • We should have performance based metrics.
• How will compliance be ensured/how will AW make sure the systems are being used?
• Is the preliminary engineering report separate from the site plan submittal? Who approves it? Development Services needs to be involved in the sign-off.
• Will there be a maximum review time for these systems?
• Need to figure out the Certificate of Occupancy (CO) process because delays add significant cost to developer. • Building won't get a final CO until getting onsite water system inspected, if no CO, cannot inhabit system, if system not inhabited wont be using onsite system.
• Need to develop regulations to allow crossing lot lines with private plumbing.
• How does an onsite reuse mandate affect the reclaimed mandate?

Affordability Considerations

- An Affordability Impact Statement is required for all new City ordinances
- Comparison to NHCD Affordable Housing Inventory reveals that 77 developments are >250,000 square feet and another 53 that are in the pipeline are potentially >250,000 square feet
- A small number of these contain 100% affordable units, but any code requirements that could impact development incentives to incorporate affordable units would also have an impact on overall housing affordability (i.e. cost of onsite reuse could outweigh developer density bonuses)

AUSTIN WATER ALTERNATIVE WATER ORDINANCES APPROACH

Fall 2019 | Summer 2020 | Fall 2020 | Fall 2023

WATER USE BENCHMARKING

Mandatory Water Balance Submittal Required

- New commercial and multi-family developments submit water balance with site plan
- >250,000 square feet developments meet with AW staff to discuss water balance results, water efficiency benchmarks, alternative water incentives and grant program

RECLAIMED WATER USE & DUAL PLUMBING

Expanded Reclaimed Water Use & Connection Requirements

- New commercial and multi-family developments >250,000 square feet must connect to reclaimed water system & dual plumb buildings if located within 500 feet of a reclaimed water main

ONSITE WATER REUSE SYSTEMS & DUAL PLUMBING

Program & Incentive Development	Program Implemented with Incentive	Mandate Implemented
• Establishes new rules/regulatory framework for Onsite Water Reuse Systems • Incentive program developed to incentivize systems under new rules	• All new Onsite Systems required to meet new rules & obtain permit from Austin Water • Incentives issued to large projects to incentivize program participation for non-mandated systems	• All new commercial and multi-family developments >250,000 square feet must incorporate Onsite Water Reuse & dual plumb buildings

Existing A/C Condensate Recovery Rules for Cooling Systems

- New facilities with 100 tons or more cooling capacity must offset at least 10% of make-up water with alternative water
- New facilities with 200 tons or more cooling capacity must reuse A/C condensate onsite

Time to develop the program prior to mandate:

- Cost data & affordability implications
- Benefits to developers (expedited permits, density bonuses, reduced water bills, etc.)
- Successful project implementation & continued use
- Establish system operator proficiencies

Draft LDC Language: Benchmarking

Development Project Requirements

(A) Beginning June 1, 2020, a small development project applicant shall submit to the director a completed water benchmarking application and water balance calculator as a condition for site plan approval.

(B) Beginning June 1, 2020, a large development project applicant, as a condition of site plan approval, shall:

(1) submit to the director a completed water benchmarking application and water balance calculator; and

(2) meet with the director to discuss water efficiency code requirements, water use benchmarking data, and incentives and rebates for alternative water use.

Draft LDC Language: Reclaimed and Dual Plumbing

Reclaimed Connection Requirements

(A) A small development project located within 250 feet of a reclaimed water line shall connect to a reclaimed water line and use reclaimed water for irrigation, cooling, toilet flushing, and other significant non-potable water uses identified in the water balance calculator.

(B) A large development project shall connect to a reclaimed water line and use reclaimed water for irrigation, cooling, toilet flushing and other significant non-potable water uses identified in the water balance calculator if the large development project is located within 500 feet of a reclaimed water line.

Draft LDC Language: Onsite Water Reuse Systems & Dual Plumbing

Onsite Water Reuse System Rules and Incentive Program

By December 1, 2020, the director shall:

(1) adopt rules to implement, administer, and enforce this article, including rules to regulate the treatment, monitoring, and reporting requirements for onsite water reuse systems; and

(2) develop an incentive program for onsite water reuse systems.

Beginning December 1, 2023, onsite water reuse systems are required for large development projects.

Next Steps

Date	Event
10/04	Public release of draft LDC
10/7 – 10/11	Potential Water Forward Task Force Ordinance Subcommittee Meeting
10/16	Two 2-hour workshops to present staff code recommendations
10/2019 -11/2019	Water Forward Task Force, W/WW Commission Briefings
12/2019	Potentially seek Council action

Questions?

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